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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SEDIGHIAN, REZA	

ART UNIT	PAPER NUMBER
2633	5

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/800,966	LAUDER ET AL.	
	Examiner	Art Unit	
	M. R. Sedighian	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-17* is/are rejected.

7)☒ Claim(s) *4 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1 and 15, it is not clear what is meant by " ... a second optical network supporting a second bit rate data stream which is substantially a multiple n of the first bit rate ..." It is not clear how the second bit rate data is a multiple n of the first bit rate data??

As to claim 11, it recites the limitations "the SONET TDM multiplexer units" in line 2, and "the two 1 Gbit/s streams" in line 3. There are insufficient antecedent basis for these limitations in the claim. Furthermore, the phrase "and to then multiplex " in line 3, should change to --- and to multiplex ---.

As to claim 12, it recites the limitations "the SONET TDM multiplexer units" in line 2, and "the 1.25 Gbit/s 8b/10b encoded GbE streams" in line 2, and "the two 1 Gbit/s streams" in line 3. There are insufficient antecedent basis for these limitations in the claim. Furthermore, the phrase "and to then multiplex " in line 3, should change to --- and to multiplex---.

As to claim 14, it recites the limitations "the decoded GbE streams" in line 2, and "the multiplexing into the 2.488 Gbit/s OC 48 data streams" in line 4. There are insufficient antecedent basis for these limitations in the claim.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroyanagi et al. (US patent No: 6,433,900).

Regarding claims 1 and 15, as it is understood in view of the above 112 problem, Kuroyanagi discloses a network hub structure (fig. 11) for connecting network elements of a first WDM network (90, fig. 11) supporting a first bit rate WDM data stream (optical signals of λ1-λn have a first bit rate) to other network elements on a second optical network (92, fig. 11) supporting a second bit rate data stream (note that optical signals entering protection switch 92 can have a second bit rate), comprising: a multiplexing system of plurality of multiplexing units (the multiplexers of protection switch 90 of fig. 11) each multiplexing unit is being arranged to multiplex n first WDM data streams (for example optical signals of λ1, λ2, λ3 in protection switch 90 of fig. 11) into one second data stream (λ1-λn, fig. 11), and a switching unit (optical XC Node 0-system, fig. 11) is arranged to selectively cross connect (col. 13, lines 58-67, col. 14, lines 1-8) any n first WDM data streams originating from one or more of the network elements (for example optical signals of λ1-λn of protection switch 90) of the WDM destined for any one of the other network elements (note that optical signals are routed to demultiplexers of protection switch 92). Kuroyanagi differs from the claimed invention in that Kuroyanagi does not specifically disclose the second bit rate data stream is a multiple n of the first bit rate. Kuroyanagi teaches a plurality of optical signals of different wavelengths that are multiplexed, switched, and demultiplexed, and it would have been obvious to a person of ordinary skill in the

art at the time of invention that optical signals in the transmission system of Kuroyanagi can have a first and a second bit rates in order to transmit a plurality of different data signals.

Regarding claim 7, Kuroyanagi the network further comprises a redundant switching unit (XC Node 1-system, fig. 11) for fault protection in case of fault in the primary switching unit (col. 5, lines 50-53).

5. Claims 1, 3, 8, 10, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761).

Regarding claims 1 and 15, as it is understood in view of the above 112 problem, Fee discloses a network hub structure (100, fig. 1) for connecting network elements of a first WDM network (136a, 136b, 136c, fig. 1) supporting a first bit rate WDM data stream (col. 4, line 10) to other network elements on a second optical network (136d, 136e, 136f, fig. 1) supporting a second bit rate data stream (col. 4, lines 7-12), comprising: a multiplexing system comprising a plurality of multiplexing units (130a, 130b, 130c, fig. 1) each multiplexing unit is being arranged to multiplex n first WDM data streams (112a, 112b, 112c, fig. 1) into one second data stream (col. 4, lines 45-50, note that a multiplex signal is transmitted over fiber 106a), and a switching unit (108a, fig. 1) is arranged to selectively cross connect (col. 4, lines 20-21) any n first WDM data streams originating from one or more of the network elements (the data streams that are routed from combiners 134a, 134b, and 134c of fig. 1) of the WDM destined for any one of the other network elements (col. 4, lines 7-10, 20-26). Fee differs from the claimed invention in that Fee does not specifically disclose the second bit rate data stream is a multiple n of the first bit rate. Fee discloses the optical network (100, fig. 1) comprises of digital cross connects switches

DCCSs for switching, routing, multiplexing and demultiplexing electrical signals into higher or lower bit rates (col. 4, lines 7-10). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that an electro-optical data transmission system such as the one of Fee can provide a second data stream with a second bit rate that is in multiple n of first bit rate of a first data stream in order to transmit a plurality of different data signals and to provide a data transmission system in compliant with SONET standards.

Regarding claim 8, Fee discloses the second network is a second WDM network (col. 5, lines 32-38).

Regarding claim 10, Fee discloses each multiplexing unit may comprise a SONET multiplexer unit (col. 4, lines 7-12).

Regarding claims 3 and 17, Fee discloses demultiplexing an incoming second data stream from the second network into n outgoing first WDM stream destined for the network element on the first WDM network (note that optical signals that are received by splitters 134a, 134b, and 134c are further demultiplexed and routed to output ports 140a for further transmission to elements of the first network).

6. Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Olshansky et al. (US Patent No: 5,418,785).

Regarding claims 2 and 16, Fee differs from the claimed invention in that Fee does not disclose a first bit rate of 1 Gbit/s and second bit rate of 2.488 Gbit/s data streams. Olshansky teaches data bits rates of 1 Gbit/s and 2.488 Gbit/s (col. 8, lines 63-68, col. 9, lines 1-10). As it is taught by Olshansky, it would have been obvious to an artisan at the time of invention to transmit

data of different rates such as of 1 Gbit/s, or 1.25 Gbit/s, or 2.488 Gbit/s, by the electro-optical data transmission system of Fee in order to transmit a plurality of different data signals.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Verthein et al. (US Patent No: 6,249,527).

Regarding claim 5, Fee differs from the claimed invention in that Fee does not disclose the multiplexing unit is incorporated in a Line Interface Card. Verthein teaches a multiplexing unit that is incorporated in a Line Interface Card (col. 4, lines 9-13). Therefore, it would have been obvious to an artisan at the time of invention to incorporate the multiplexing units of Fee in line Interface cards, as it is taught by Verthein, in order to selectively connect or assign multiplexers to different transmission lines.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Dempsey (US Patent No: 6,526,021).

Regarding claim 9, Fee differs from the claimed invention in that Fee does not disclose each multiplexing unit comprises a 2xGbE/OC48 Packet over SONET multiplexer unit. Dempsey discloses an OC48 multiplexer unit (140, fig. 3 and col. 6, lines 12-15). Therefore, it would have been obvious to an artisan at the time of invention to incorporate a plurality of OC48 multiplexer units such as the one of Dempsey for each respective multiplexer unit in the electro-optical data transmission system of Fee in order to multiplex and map different OC48 data streams.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Verthein et al. (US Patent No: 6,249,527) and in further view of Parrish et al. (US Patent No: 6,550,016).

Regarding claim 6, the modified communication system of Fee and Verthein differs from the claimed invention in that Fee and Verthein do not disclose a plurality of Trunk Interface Cards. It is known that Trunk interface cards can be incorporated in data transmission system to convert optical signals into electrical signals or vise-versa. Parrish teaches a plurality of Trunk Interface Cards (col. 4, lines 20-25 and 30, 32, 34, 36, fig. 2). Therefore, it would have been obvious to an artisan at the time of invention to incorporate Trunk Interface Cards, as it is taught by Parrish in the modified electro-optical data transmission system of Fee and Verthein in order to convert the WDM optical signals into electrical signals or to convert electrical signals into optical signal.

10. Claims 4 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

M. R. Sedighian

M.R. SEDIGHIAN
Patent Examiner
Art Unit: 2633